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FACSIMILE TRANSMITTAL SHEET

TO: Examiner: Camquy TRUONG	FROM: Sumit Bhattacharya
COMPANY: USPTO	DATE: May 6, 2008
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RE: Application No.: 10/001,961	YOUR REFERENCE NUMBER: Group Art Unit: 2195

☐ URGENT ■ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ CONFIRMATION

☐ ORIGINAL WILL FOLLOW ■ ORIGINAL WILL NOT FOLLOW

Notes/Comments: **SUPPLEMENTAL AMENDMENT**

1. Fax Cover Sheet (1)
2. Supplemental Amendment (9)

Total: (10) pages

Dear Ms. Truong:

Per our conversation, I am faxing you a supplemental amendment. Thank you.

PATENT

Attorney Docket No.: 2207/12035
Assignee: Intel Corporation

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS:	Jason G. SANDRI et al.
SERIAL NO:	10/001,961
FILING DATE:	December 5, 2001
TITLE:	METHOD AND APPARATUS FOR CONTROLLING ACCESS TO SHARED RESOURCES IN AN ENVIRONMENT WITH MULTIPLE LOGICAL PROCESSORS
ART UNIT:	2195
EXAMINER:	Camquy TRUONG

M/S: AMENDMENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL AMENDMENT

Dear Sir:

The following remarks below are respectfully submitted to the Office Action dated September 21, 2007.

Amendments to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 9 of this paper.

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method comprising:

for a first logical processor, obtaining a lock on a semaphore controlling exclusive access to a resource descriptor, the resource descriptor describing a usage allocation of resources shared among a plurality of logical processors wherein the lock is obtained by a semaphore lock routine comprising writing an identifier of the logical processor and a lock value into a semaphore register;

obtaining exclusive access for said first logical processor to said resource descriptor if said lock is obtained;

determining which shared resources the first logical processor needs;

generating resource reservation data identifying the needed resource;

applying the resource reservation data to the resource descriptor;

querying said resource descriptor to determine whether resources needed by said first logical processor are available;

if resources needed by said first logical processor are available, updating said resource descriptor to reserve said resources for exclusive use by said first logical processor; and

releasing, utilizing a semaphore lock release routine to pass the identifier of the logical processor and a lock value, said exclusive access for said first logical processor to said resource descriptor.

2. (Original) The method of claim 1, further comprising:

if said resources needed by said first logical processor are not available, releasing said exclusive access for said first logical processor to said resource descriptor.

3. (Original) The method of claim 1, further comprising, after the releasing, accessing a shared resource by said first logical processor.

4. (Original) The method of claim 1, further comprising:

after exclusive access for said first logical processor to said resource descriptor is released, obtaining exclusive access for a second logical processor to said resource descriptor;

querying said resource descriptor to determine whether resources needed by said second logical processor are available;

if resources needed by said second logical processor are available, updating said resource descriptor to reserve said resources for the exclusive use of said second logical processor; and

releasing said exclusive access for said second logical processor to said resource descriptor.

5. (Original) The method of claim 4 further comprising:

if said resources needed by said second logical processor are not available, releasing said exclusive access for said second logical processor to said resource descriptor.

6-9. (Cancelled)

10. (Currently Amended) An apparatus comprising:

a plurality of logical processors to generate resource reservation data identifying a plurality of resources shared by said plurality of logical processors;

a resource descriptor to utilize said resource reservation data to identify a status of said shared resources; and

a semaphore comprising a semaphore register to reserve exclusive access for one of said plurality of logical processors to said resource descriptor, wherein a semaphore lock routine writes an identifier of one of the plurality of logical processors and a lock value into the semaphore register, and the plurality of logical processors, the resource descriptor, and semaphore are configured to:

obtain a lock on the semaphore controlling exclusive access to the resource descriptor;

obtain exclusive access for a first logical processor of said plurality of logical processors to said resource descriptor if said lock is obtained;

determine which shared resources the first logical processor needs;

generate resource reservation data identifying the needed resource;

apply the resource reservation data to the resource descriptor;

query said resource descriptor to determine whether resources needed by said first logical processor are available;

if resources needed by said first logical processor are available, update said resource descriptor to reserve said resources for exclusive use by said first logical processor; and

release, utilizing a semaphore lock release routine to pass the identifier of the logical processor and a lock value, said exclusive access for said first logical processor to said resource descriptor.

11. (Previously Presented) The apparatus of claim 10, further comprising logic to:

cause a first logical processor to update said semaphore to reserve exclusive access to said resource descriptor;

cause said first logical processor to update said resource descriptor to reserve exclusive use of at least a first resource of said shared resources; and

subsequently cause said first logical processor to update said semaphore to release said exclusive access.

12. (Previously Presented) The apparatus of claim 11, said logic to further:

cause a second logical processor to update said semaphore to reserve exclusive access to said resource descriptor;

cause said second logical processor to update said resource descriptor to reserve exclusive use of at least a second resource of said shared resources; and

subsequently cause said second logical processor to update said semaphore to release said exclusive access;

wherein after reserving exclusive use of said first and second resources, respectively, said first and second logical processors concurrently use said first and second resources, respectively.

13-17. (Cancelled)

18. (Currently Amended) A system comprising:

a plurality of logical processors to generate resource reservation data identifying;

a plurality of resources to be shared by said logical processors;

a resource descriptor utilize said resource reservation data to identify a status of said shared resources and to control access to said resources;

a semaphore register to reserve exclusive access for one of said plurality of logical processors to said resource descriptor to said resource descriptor, wherein a semaphore lock routine is to write an identifier of one of the plurality of logical processors and a lock value into the semaphore register; and

access control logic to allocate one or more of said shared resources only when granted exclusive access to said resource descriptor by said semaphore register; and the plurality of logical processors, a plurality of resources, the resource descriptor, the semaphore register, and the access control logic are configured to:

obtain a lock on the semaphore controlling exclusive access to the resource descriptor;

obtain exclusive access for a first logical processor of said plurality of logical processors to said resource descriptor if said lock is obtained;

determine which shared resources the first logical processor needs;

generate resource reservation data identifying the needed resource;

apply the resource reservation data to the resource descriptor;

query said resource descriptor to determine whether resources needed by

said first logical processor are available;

if resources needed by said first logical processor are available, update said resource descriptor to reserve said resources for exclusive use by said first logical processor; and

release, utilizing a semaphore lock release routine to pass the identifier of the logical processor and a lock value, said exclusive access for said first logical processor to said resource descriptor.

19. (Previously Presented) The system of claim 18, wherein said resource descriptor includes a plurality of fields each to associate a resource with a logical processor identifier.

20. (Previously Presented) The system of claim 18, wherein said access control logic is to

obtain a lock on said semaphore register to reserve exclusive access to said resource descriptor,

determine whether a needed resource is available based on said resource descriptor,

if so, reserve the resource, and

release the lock on the semaphore register.

21. (Previously Presented) The system of claim 20, wherein said access control logic is further to reserve one or more resources by assigning a logical processor identifier to a corresponding resource.

22-23. (Cancelled).

24. (Previously Presented) A system comprising:

a plurality of logical processors;

a plurality of resources to be shared by said logical processors;

a resource descriptor to control access to said resources;

a semaphore register to reserve exclusive access for one of said plurality of logical processors to said resource descriptor; and

access control logic to allocate one or more of said shared resources only when granted exclusive access to said resource descriptor by said semaphore register; and

unlock logic to prevent a failing logical processor from retaining a lock on the semaphore register, wherein the unlock logic includes causing a logical processor different from the failing logical processor to call a semaphore lock release routine and pass the routine the identifier of the failing logical processor.

REMARKS/ARGUMENTS

Claims 1-5, 10-15, 18-21 and 24 are pending. Claims 6-9, 16-17 and 22-23 were previously cancelled. In this Amendment, claims 10 and 18 are amended, and claims 13-15 are cancelled without prejudice or disclaimer.

Applicants respectfully submit independent claims 1, 10, 18, and 24 are allowable, and claims 2-5, 11-12, and 19-21 are allowable at least for depending from an allowable bas claims. Reconsideration of the current rejection in light of the amendments is respectfully requested. Applicants reserve the right to pursue the subject matter of all claims presented for examination in this application, included cancelled claims, in future continuing applications.

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (408) 975-7500 to discuss any matter concerning this application.

The Office is authorized to charge any fees related to this communication to Deposit Account No. **11-0600**.

Respectfully submitted,
KENYON & KENYON LLP

Dated: May 6, 2008

By: /Sumit Bhattacharya/
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